

CLAIMS

I claim:

1. A composite fabric, comprising an arrangement of fibers and composite yarns wherein the composite yarns each comprise an elastomeric core and an elastomeric thermoplastic sheath disposed about the core wherein the melting point temperature of the sheath is at least about 10°C lower than the melting point temperature of the core, and wherein the fibers are anchored in the sheath of the composite yarns.

2. The composite fabric of claim 1 wherein the fabric comprises ground warp yarns, filling yarns and pile.

3. The composite fabric of claim 2 wherein the ground warp yarns comprise composite yarns.

4. The composite fabric of claim 2 wherein the filling yarns comprise composite yarns.

5. The composite fabric of claim 2 wherein the ground warp yarns and the filling yarns comprise composite yarns.

6. The composite fabric of claim 2 wherein the pile comprises conventional yarns.

7. The composite fabric of claim 2 wherein the ground warp yarns consist essentially of composite yarns.

8. The composite fabric of claim 2 wherein the filling yarns consist essentially of composite yarns.

9. The composite fabric of claim 2 wherein the ground warp yarns and the filling yarns consist essentially of composite yarns.

10. The composite fabric of claim 6 wherein the conventional yarns are interlaced with respect to the ground warp yarns or filling yarns or both in a "V" or "W" configuration wherein the conventional yarns are wrapped around either one or three composite yarns of the ground warp yarns or the filling yarns or both.

11. A composite pile fabric, comprising an arrangement of composite yarns as ground warp yarns and filling yarns and conventional yarns as pile wherein the composite yarns each comprise an elastomeric core and an elastomeric thermoplastic sheath disposed about the core wherein the melting point temperature of the sheath is at least about 50°C to about 75°C lower than the melting point temperature of the core, and wherein the conventional yarns are anchored in the sheath of the composite yarns.

12. A method of making a composite fabric comprising the steps of:

forming an arrangement of fibers and composite yarns wherein the composite yarns comprise an elastomeric core and an elastomeric thermoplastic sheath disposed about the core wherein the melting point temperature of the sheath is at least about 10°C lower than the melting point temperature of the core;

heating the arrangement of fibers and composite yarns to a temperature above that of the melting point temperature of the sheath of the composite yarns but below that of the melting point temperature of the core of the composite yarns; and cooling the composite fabric.

13. The method of claim 12 wherein the melting point temperature of the sheath is at least about 50°C to about 75°C lower than the melting point temperature of the core.

14. The method of claim 12 wherein the forming step comprises weaving.

15. The method of claim 12 wherein the forming step comprises pile weaving whereby ground warp yarns and filling yarns comprising the composite yarns are interlaced with a pile of conventional fibers.

16. The method of claim 15 wherein the pile is interlaced in a "V" or "W" configuration so the pile are wrapped around

either one or three composite yarns of the ground warp yarns or the filling yarns or both.

5 17. A method of making a composite pile fabric comprising the steps of:

10 forming an arrangement of composite yarns as ground warp yarns and filling yarns and conventional yarns as pile wherein the composite yarns each comprise an elastomeric core and an elastomeric thermoplastic sheath disposed about the core wherein the melting point temperature of the sheath is at least about 50°C to about 75°C lower than the melting point temperature of the core;

15 heating the arrangement of fibers and composite yarns to a temperature above that of the melting point temperature of the sheath of the composite yarns but below that of the melting point temperature of the core of the composite yarns; and

cooling the composite fabric.

add
ADD
C3